Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES R. MYERS,
DAVID R. SMITH,
WILLIAM J. DEGNAN, III,
and
LAWRENCE A. WESTHOVEN

Appeal No. 1999-1907
Application No. 08/690,409

ON BRIEF

Before GARRIS, DELMENDO, and JEFFREY T. SMITH, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 22, which are all of the claims pending in the above-identified application.

The subject matter on appeal relates to an infrared-transparent structure comprising at least a first infrared

transparent element and a layer of the recited solvent-free polymer material disposed on the first face of the first infrared-transparent element. According to the appellants, "[t]he absence of a solvent is critical to the invention," because they have discovered that the presence of a solvent may lead to the formation of bubbles, which distort transmitted light. (Appeal brief, page 3.) Further details of this appealed subject matter are recited in illustrative claims 1, 12, and 20, the only independent claims on appeal, reproduced below:

> 1. An infrared-transparent structure, comprising:
> a first infrared-transparent element having a first face; and
> a layer of a solvent-free polymer material disposed on the first face of the first infrared-transparent element, wherein the solvent-free polymer material is not a solvent-free epoxy and is not a solvent-free cyanoacrylate.
>
> 12. An infrared-transparent structure, comprising:
> a first infrared-transparent element having a first face, the first infrared-transparent element being transparent to infrared energy in the 3.6-7 micrometer wavelength range;
> a second infrared-transparent element having a second face, the second infrared-transparent element being transparent to infrared energy in the 3.6-7 micrometer wavelength range;
> a layer of a solvent-free polymer material disposed between and contacting the first face of the first infrared-transparent element and the second face

of the second infrared-transparent element, the polymer material being characterized by an infrared transparency wherein a 10-micrometer thickness of the polymer material is at least 95 percent transparent to infrared energy in the 3.6-7 micrometer wavelength range, wherein the solvent-free polymer material is not a solvent-free epoxy and is not a solvent-free cyanoacrylate.

20. An infrared-transparent structure, comprising:

a first infrared-transparent element transparent to infrared energy in the 3.6-7 micrometer wavelength range, the first infrared-transparent element having a first face with a first antireflective coating thereon;

a second infrared-transparent element transparent to infrared energy in the 3.6-7 micrometer wavelength range, the second infrared-transparent element having a second face with a second antireflective coating thereon;

a layer of a solvent-free polymer material disposed between and contacting the first face and the second face, the polymer material comprising from about 1 to about 4 percent by weight 3-glycidoxypropyltrimethoxysilane, balance addition-cured dimethyl silicone.

The examiner does not rely on any prior art to support any of the rejections before us.

Claims 1 through 22 on appeal stand rejected under the first paragraph of 35 U.S.C. § 112 "as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention." (Examiner's answer, pages 2-3.) Also, claims 1, 2,

8 through 14, 18, 19, 21, and 22 on appeal stand rejected under the first paragraph of 35 U.S.C. § 112, "because the specification, while being enabling for addition curable silicone material produced by Castall Inc under trade name Castall S-1332, does not reasonably provide enablement for a solvent-free polymer material." (Id. at pages 3-4.)

We reverse these rejections.

The examiner's position with respect to the rejection of appealed claims 1 through 22 is as follows:

> It appears from the specification that composition of addition cured silicone material is critical for the invention. However, the disclosure fails to teach one of ordinary skill in the art the composition of addition curable silicone material. There are quite a few addition curable silicone materials that are commercially known. Therefore, in absence of providing composition of addition curable silicone material, a person of ordinary skill in the art would have to carry out burdensome experiments. The disclosure discloses one commercial product Castall S-1332. However it appears from the specification and from the technical data sheet that Castall S-1332 is not chemically identified and it is a proprietary trade material. The owner of this material can change the composition of that material at any time. Therefore, in absence of providing chemical nature of this material, the disclosure is deemed to be insufficient for practicing this invention.

(Examiner's answer, page 3.)

While it is not entirely clear from the statement of the rejection and the explanation of the rejection quoted above as

to whether the rejection is based on lack of written description or on lack of enablement, it is our judgment that the examiner has not met the threshold burden of proof for either basis. In re Alton, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996); In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982).

We first address lack of written description under the first paragraph of 35 U.S.C. § 112. In order for applicants to satisfy the written description requirement of 35 U.S.C. § 112, first paragraph, the disclosure of the application as originally filed must reasonably convey to those skilled in the relevant art that the applicants, as of the filing date of the original application, had possession of the claimed invention. Alton, 76 F.3d at 1172, 37 USPQ2d at 1581; In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

In the present case, the examiner has failed to present any "'evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.'" Alton, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (quoting from In re Wertheim, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976)). That the "disclosure fails to teach one of ordinary skill in the art the composition of addition

curable silicone material" or that the complete chemical identity of Castall S-1332 is not described in the specification is insufficient to satisfy the examiner's initial burden of proof as to lack of written description under 35 U.S.C. § 112, first paragraph.

We now address the rejection to the extent that it may be based on lack of enablement. "Although not explicitly stated in section 112, to be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'"[1] In re Wright, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). As long as "undue experimentation" is not involved, a specification would comply with the enablement requirement of the statute even if a reasonable amount of routine experimentation is necessary to practice the claimed invention.

[1] The question of whether making and using the invention would have required "undue experimentation" depends on several underlying factual inquiries including: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. In re Wands, 858 F.2d 731, 735, 736-37, 8 USPQ2d 1400, 1402, 1404 (Fed. Cir. 1988).

Enzo Biochem Inc. v. Calgene, 188 F.3d 1362, 1371, 52 USPQ2d 1129, 1135 (Fed. Cir. 1999). That is, even "a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed..." Wands, 858 F.2d at 737, 8 USPQ2d at 1404.

Here, the examiner's rejection does not even mention the legal test of "undue experimentation," much less specifically discuss any of the underlying factual inquiries adopted in Wands. Again, that the "disclosure fails to teach one of ordinary skill in the art the composition of addition curable silicone material" or that the complete chemical identity of Castall S-1332 is not described in the specification is insufficient to satisfy the examiner's initial burden of proof as to lack of enablement under 35 U.S.C. § 112, first paragraph. Specifically, the appellants have argued that the examiner has mischaracterized the invention as requiring "addition cured silicone." (Appeal brief, pages 4-5.) According to the appellants, any solvent-free polymer material other than the two excluded polymers will work. (Id. at pages 8-9.) The examiner

has not provided any factual evidence or acceptable scientific reasoning to the contrary.

Under these circumstances, we cannot uphold the examiner's 35 U.S.C. § 112, first paragraph, rejection of appealed claims 1 through 22.

Concerning the rejection of appealed claims 1, 2, 8 through 14, 19, 21, and 22, the examiner's position is as follows:

> The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.
>
> According to the specification, solvent free epoxy resins and solvent cyanoacrylate polymer are unacceptable either because it results in film having low infrared transmission or rapid cure rate (page 6, lines 16-33). Furthermore there is no disclosure of any polymer other than addition curable silicone polymer which would work in the instant invention. The chemical structure of addition curable silicone polymer is not provided in the instant disclosure. Therefore claiming a solvent free polymer material is broader in scope.

(Examiner's answer, pages 3-4.)

Again, we hold that the examiner has not met his initial burden of proof. The examiner's position appears to be based on the notion that the specification does not contain an identification of a sufficient number of solvent-free polymer materials that will work. As we discussed above, the appellants have argued that any solvent-free polymer material other than

the two excluded polymers will work. While the examiner relies on the statement in the specification at page 2, lines 2 and 3 that "infrared-transparent polymer adhesives of sufficiently good optical and mechanical quality have not been available" (examiner's answer, page 4), the appellants assert that they have now discovered that any solvent-free polymer material other than the two excluded polymers will work. The examiner has not provided any evidence or reasoning, other than assumptions and speculations, to refute the appellants' assertion.

For these reasons, we reverse the examiner's rejections under the first paragraph of 35 U.S.C. § 112.

The decision of the examiner is reversed.

REVERSED

BRADLEY R. GARRIS Administrative Patent Judge	)
ROMULO H. DELMENDO Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
JEFFREY T. SMITH Administrative Patent Judge	)

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